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## Chemical Control of the Unabi Fly Population (*Carpomyia Wesuwiana* Costa.)

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**Abstract:** *The article presents the bioecological characteristics of the unabli fly and the effectiveness of the drugs Decis 2.5% e.c., Bi-58 40% e.c., Summi-alpha 5% e.c., Karbofos 50% e.c.*

**Keywords:** *Unabi fly, drugs, bioecology, damage, effectiveness, unabli fruit, profitability.*

**Introduction.** When establishing new gardens of unabli (*Ziziphus jujuba* Mill.), an urgent task is to take measures against diseases and pests. In the conditions of Uzbekistan, the unabli fly (*Carpomyia Wesuwiana* Costa) is very widespread and is often found in unabli gardens. In orchards infected with unabli fly larvae, 90-95% of the crop may die [1,2,4,5].

**Material and research methods.** The purpose of the study is to study the dynamics of the development of the unabli fly in the queen cells of the unabli nursery in the conditions of the Scientific Research Institute of Horticulture, Viticulture and Winemaking of Uzbekistan named after Academician M. Mirzaev of the Samarkand Scientific Experimental Station and the effectiveness of chemical preparations used against flies.

Decis 2.5% e.c., Bi-58 40% e.c., Summi-alpha 5% e.c., Karbofos 50% e.c. were tested against the unabli fly in the queen cells of the Unabi nursery, and their biological effectiveness was determined.

To determine the dynamics of development of the Unabi fly, 10 trees were studied in each replication. The experiments were carried out on the basis of "Guidelines for testing insecticides, acaricides, biologically active substances and fungicides", published under the editorship of Professor Sh.T. Khodzhaev [3]. The biological effectiveness of the drugs was calculated using the Abbott formula. Observations to determine the importance of Unabi fly control measures before and after chemical spraying took place on 3; 7; and 14 days.

In the Unabi gardens, all agrotechnical measures were carried out efficiently and treated with pesticides 3 times: before flowering, the second and third treatments were carried out 15-20 days later.

**Research materials and their analysis.** The unabi fly is a monophage and only damages unabi fruits. The adult insect is pale yellow in color, the entire body is covered with golden-yellow hairs. The body length of the female is 4.5-5.5 mm, the length of the male is 3.5-4 mm. In fact, it overwinters in the soil at the base of the branches (in fallen fruits) in the form of a false cocoon. The unabi fly flies in large numbers in the second or third decade of June, when the unabi flower blooms and bears fruit. After feeding for 6-10 days in the first ten days of July, the female fly pierces the fruit membrane with her oviduct and lays 35-50 eggs in it. The hatched worm (larva) feeds inside the fruit, makes paths around the grain and fills them with its excrement. Damaged fruits shrink before ripening and turn brown prematurely [7].

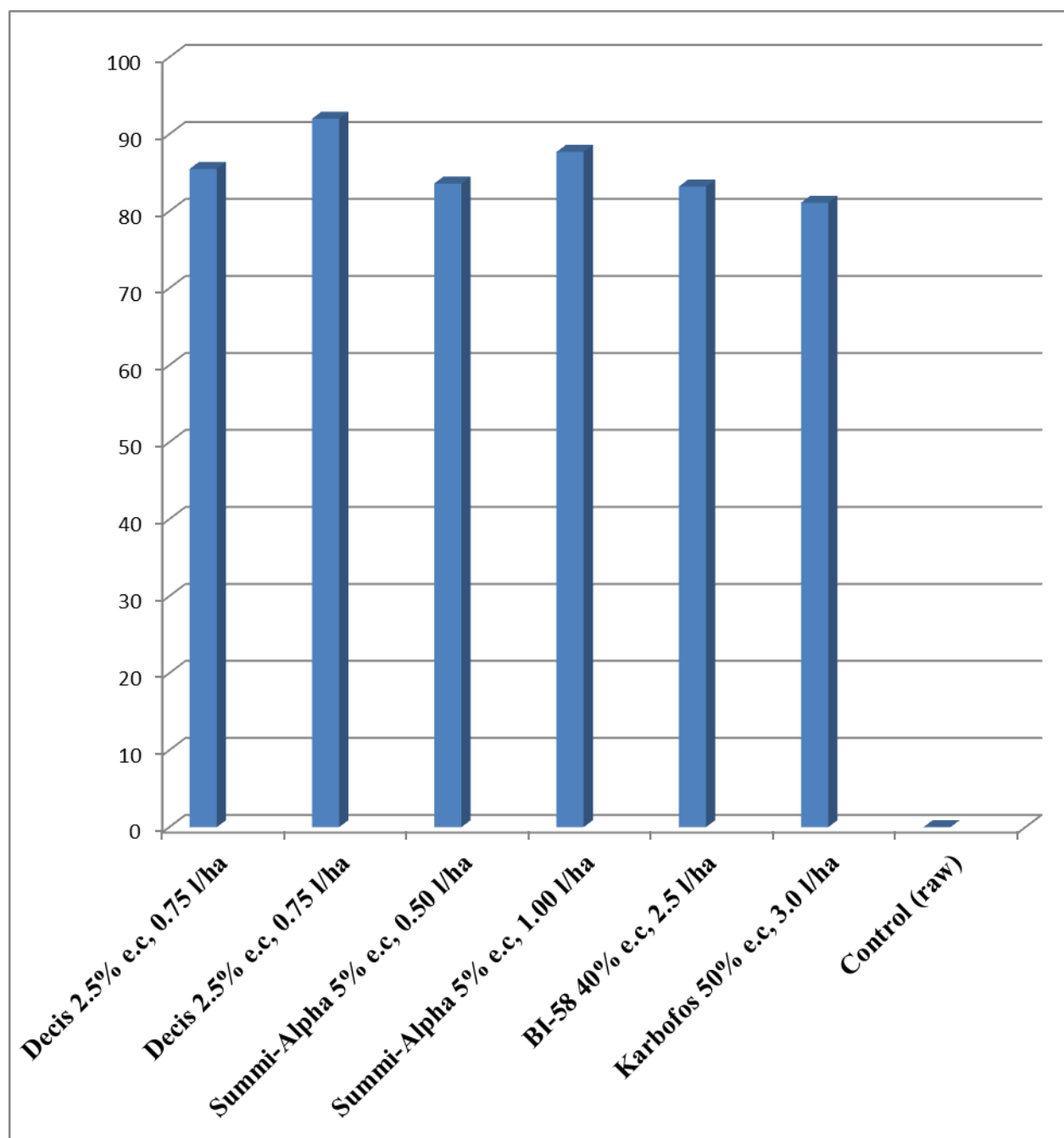
Most of the affected fruits fall off, the seeds are destroyed and become unsuitable for planting. The larvae feed inside the fruit for 20-26 days and spend two instars during this period. Its color is white. The body is worm-shaped, the head is narrowed, after growth it pierces the skin of the fruit and comes out, and during the day the larva begins to turn into a cocoon, in the second ten days of August the second generation flies fly out, and the flight continues until the end of September. In most cases, the larvae pupate inside rotting fruits and false cocoons emerge from these fruits. The second generation of flies is very numerous and damages ripening and ripe fruits. In this environment, the worms that have settled in the fruits live until the third ten days of October. The unabi fly flies from the trees where they have settled to newly planted seedlings. The unabi worm and its cocoons are spread during transportation and storage of the unabi crop.

Among the chemical agents used against the unabi fly in the queen cells of the Unabi nursery, Decis was sprayed at a dose of 0.75 and 1.0 l/ha with a biological effectiveness of 84.2-87.6%, respectively, in 14 days. In these options, the greatest biological efficiency (89.6-95.4%) was observed on the 7th day of calculation. When applying Summi-alpha at a rate of 0.5-1.0 l/ha, the biological efficiency is higher than that of the model option (Karbofos, 3.0 l/ha), and on the 7th day this figure reaches 87.4-92.5% respectively.

When using BI-58 at a rate of 2.5 l/ha against the unabi fly, the biological effectiveness was 86.8% on the 7th day compared to the control, and 80.1% on the 14th day.

In unabi gardens, high biological effectiveness is achieved by using Decis 2.5% e.c. 1.0 l/ha, Summi-alpha 5% e.c. 1.0 l/ha against its specialized pest - the unabi fly, which is specialized in horticulture. use it on farms.

Thus, the biological effectiveness of 84.2-87.6% was achieved in 14 counting days in Decis at application doses of 0.75 and 1.0 l/ha of chemical agents against the unabi fly. In these options, the greatest biological efficiency (89.6-95.4%) was observed on the 7th day of calculation.



### Biological effectiveness of chemicals against unabi flies in the garden

(Ta-yang-zao variety, working fluid consumption 1000 l/ha).

**Conclusions.** In the Unabi garden, when used as fly control chemicals, Unabi Summi-Alpha 5% e.c. 1.00 l/ha and Decis 2.5% e.c. 1.00 l/ha, the average net benefit per 1 hectare according to the options was 55,704,838 and 5,7472,280 soums, respectively. In the experiment, the greatest net profit was obtained in the variant of using Decis 2.5% e.c. in the amount of 1.00 l/ha and amounted to 57,472,280 sum.

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